

CLAIMS

We claim:

- Sub B11
1. A method in a computing system for ranking items in a search result, the method comprising:
 - receiving a query specifying one or more terms;
 - generating a query result identifying a plurality of items satisfying the query;and
 - for a plurality of items identified in the query result, combining ratings reflecting both (a) the frequencies with which users selected the item in query results produced for earlier queries specifying one or more terms of the query and (b) levels of effort required to make such selections, such that the combination of ratings produces a ranking value for the item.
 2. The method of claim 1 wherein the ratings that are combined reflect the number of items that preceded the selected items in the query results from which they were selected.
 3. The method of claim 1 wherein the ratings that are combined reflect the set of navigation commands needed to reach the selected items in the query results from which they were selected.
 4. The method of claim 1 wherein the ratings that are combined reflect the extent to which the query results from which the items were selected were scrolled to reach the selected items.

5. The method of claim 1 wherein the ratings that are combined reflect, in the query results from which the items were selected, the number of pages of each query result that preceded the page of each query result containing the selected item.

6. A method in a computing system for compiling statistics usable to rank items in a distinguished query result produced for a distinguished query, the method comprising:

receiving a rating set of queries, each query in the rating set specifying one or more terms;

for each query in the rating set,

generating a query result identifying one or more items satisfying the query;

allowing a user to select one or more of the items identified in the query result; and

for items selected from the query result, for terms specified by the query,

determining an adjustment factor indicating the level of effort necessary to effectuate selection of the item; and

adjusting a rating score corresponding to the combination of the selected item and the term specified by the query by the determined adjustment factor;

such that rating scores are produced that are usable to rank items in a distinguished query result produced for a distinguished query.

7. The method of claim 6 wherein determining each adjustment factor includes increasing the adjustment factor for items occurring in the query result before the selected item.

8. The method of claim 6 wherein determining each adjustment factor includes increasing the adjustment factor for navigation operations performed to reach the selected item in the query result.

9. A computer memory containing a user behavior data structure usable to rank the relevance of items in a query result, the data structure comprising a plurality of rating scores, each rating score corresponding both to a query term and to an item, and reflecting quantitatively the extent to which users have selected the item from query results generated from queries specifying the query term and the level of effort required to make such selections,

such that the data structure may be used to rank items in a distinguished query result produced for a distinguished query by, for each item in the distinguished query result, retrieving from the data structure the rating scores corresponding to the item and any term specified in the distinguished query and combining the retrieved rating scores to generate a ranking value for the item.

10. A method in a computing system for assessing the usefulness of a distinguished item relative to queries containing a distinguished query term, comprising:

from among a plurality of executed queries, identifying queries containing the distinguished query term in whose query results the distinguish item was both (a) included and (b) selected;

for each identified query, determining a constituent score reflecting the amount of effort needed to select the query; and

combining the determined constituent score to obtain an overall score indicating the usefulness of the distinguished item relative to queries containing the distinguished query term.

11. The method of claim 10, further comprising using the obtained overall score to position the distinguished item in the query result of a query containing the distinguished term.

12. The method of claim 10 wherein the determination of each constituent score is based on a position of the distinguished item within the query result of the identified query.

13. The method of claim 10 wherein the determination of each constituent score is based on a level of prominence of the distinguished item within the query result of the identified query.

14. The method of claim 10 wherein the determination of the constituent score for each identified query is based on the navigation commands issued after the query result is displayed and before the distinguished item is selected.

15. The method of claim 10 wherein the determination of the constituent score for each identified query is based on an amount of time that elapses between the display of the query result and the selection of the distinguished item.

16. A computer-readable medium whose contents cause a computing system to rate the usefulness of a distinguished item relative to queries containing a distinguished query term by:

from among a plurality of executed queries, identifying queries containing the distinguished query term in whose query results the distinguish item was both (a) included and (b) selected;

for each identified query, determining a constituent score reflecting the amount of effort needed to select the query; and

combining the determined constituent score to obtain an overall score indicating the usefulness of the distinguished item relative to queries containing the distinguished query term.

17. A computing system for assessing the usefulness of a distinguished item relative to queries containing a distinguished query term, comprising:

a query identification subsystem that identifies from among a plurality of executed queries queries containing the distinguished query term in whose query results the distinguish item was both (a) included and (b) selected;

a constituent score determination subsystem that determines a constituent score for each identified query reflecting the amount of effort needed to select the query; and

an overall score determination subsystem that combines the determined constituent score to obtain an overall score indicating the usefulness of the distinguished item relative to queries containing the distinguished query term.

18. A method in a computing system ranking items in a search result, the method comprising:

receiving a query specifying one or more terms;

generating a query result identifying a plurality of items satisfying the query;

and

for a plurality of items identified in the query result, combining ratings of frequencies with which users selected the item in earlier queries specifying either (a) one or more terms of the query or (b) a term sharing a root with a term of the query to produce a ranking value for the item.

19. A computer-readable medium whose contents cause a computing system to rank items in a search result by:

receiving a query specifying one or more terms;

generating a query result identifying a plurality of items satisfying the query;

and

for a plurality of items identified in the query result, combining ratings of frequencies with which users selected the item in earlier queries specifying either (a) one or more terms of the query or (b) a term sharing a root with a term of the query to produce a ranking value for the item

20. A method in a computing system for compiling statistics usable to rank items in a distinguished query result produced for a distinguished query, the method comprising:

receiving a rating set of queries, each query in the rating set specifying one or more terms;

for each query in the rating set,

generating a query result identifying one or more items satisfying the query;

allowing a user to select one or more of the items in the query result; and

for items selected from the query result, for each item, adjusting a rating score corresponding to the combination of the item and the search term to the root of the term specified by the query, the rating score indicating the number of users which have selected the selected item when the selected item is included in the search results generated from queries containing a search term specified by the query, to produce rating scores usable to rank the query result produced for a distinguished query.

allowing a user to select one or more of the items in the query result; and

for items selected from the query result, for each item, adjusting a rating score corresponding to the combination of the item and the search term to the root of the term specified by the query, the rating score indicating the number of users which have selected the selected item when the selected item was included in search results generated from queries containing a search term specified by the query, to produce rating scores usable to rank the query result produced for a distinguished query.

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